

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (CURRENTLY AMENDED) A method for determining ~~the~~ a frequency of current ripples contained in ~~the~~ an armature current signal of a commutated direct current (DC) motor, the method comprising:

determining a frequency spectral result of the armature current signal of the motor in which the armature current signal contains current ripples and interference;

determining a frequency spectral result of a voltage signal of the motor in which the voltage signal contains the interference;

determining a frequency spectral result of the current ripples contained in the armature current signal based on differences between the frequency spectral result of the armature current signal and the frequency spectral result of the motor voltage signal such that the determined frequency spectral result of the current ripples contained in the armature current signal is void of frequency components which are superimposed on the armature current signal as the interference; and

determining the frequency of the current ripples contained in the armature current signal from the determined frequency spectral result of the current ripples contained in the armature current signal.

2. (ORIGINAL) The method of claim 1 wherein the armature current signal is an analog armature current signal, the method further comprising:

digitizing the analog armature current signal;

wherein determining the frequency spectral result of the armature current signal includes determining the frequency spectral result of the digitized armature current signal.

3. (PREVIOUSLY PRESENTED) The method of claim 1 wherein:

determining the frequency spectral results of the armature current signal and the motor voltage signal includes using a fast Fourier transform on the armature current signal and

the motor voltage signal to determine the frequency spectral results of the armature current signal and the motor voltage signal.

4-5. (CANCELLED)

6. (CURRENTLY AMENDED) The method of claim 1 wherein:
the frequency of the current ripples ~~ripple frequency~~ is determined during a start-up phase of the motor.

7. (CURRENTLY AMENDED) The method of claim 1 further comprising:
determining rotational speed of a drive shaft of the motor based on the frequency of the current ripples ~~ripple frequency~~; and
determining rotational position of the drive shaft based on the rotational speed of the drive shaft.

8. (CANCELLED)

9. (CURRENTLY AMENDED) The method of claim 7 further comprising:
monitoring the frequency of the current ripples ~~ripple frequency~~ for changes during the operation of the motor.

10. (CURRENTLY AMENDED) The method of claim 9 further comprising:
counting the current ripples contained in the armature current signal; and
modifying the number of counted current ripples as a function of a change in the frequency of the current ripples ~~ripple frequency~~ during the operation of the motor.

11. (CURRENTLY AMENDED) A method for determining ~~the~~ a frequency of current ripples contained in ~~the~~ an armature current signal of a commutated direct current (DC) motor, the method comprising:

determining a frequency spectral result of the armature current signal of the motor in which the armature current signal contains current ripples and interference;

determining a frequency spectral result of a voltage signal of the motor in which the motor voltage signal contains the interference;

determining a frequency spectral result of the current ripples contained in the armature current signal based on differences between the frequency spectral result of the armature current signal and the frequency spectral result of the motor voltage signal such that the determined frequency spectral result of the current ripples contained in the armature current signal is void of frequency components which are superimposed on the armature current signal as the interference without filtering any of the frequency spectral results of the armature current signal and the motor voltage signal; and

determining the frequency of the current ripples contained in the armature current signal from the determined frequency spectral result of the current ripples contained in the armature current signal.

12. (PREVIOUSLY PRESENTED) The method of claim 11 wherein the armature current signal is an analog armature current signal, the method further comprising:

digitizing the analog armature current signal;

wherein determining the frequency spectral result of the armature current signal includes determining the frequency spectral result of the digitized armature current signal.

13. (PREVIOUSLY PRESENTED) The method of claim 11 wherein:

determining the frequency spectral results of the armature current signal and the motor voltage signal includes using a fast Fourier transform on the armature current signal and the motor voltage signal to determine the frequency spectral results of the armature current signal and the motor voltage signal.

14-15. (CANCELLED)

16. (CURRENTLY AMENDED) The method of claim 11 wherein:
the frequency of the current ripples ~~ripple frequency~~ is determined during a start-up phase of the motor.

17. (CURRENTLY AMENDED) The method of claim 11 further comprising:
determining rotational speed of a drive shaft of the motor based on the frequency of the current ripples ~~ripple frequency~~; and
determining rotational position of the drive shaft based on the rotational speed of the drive shaft.

18. (CURRENTLY AMENDED) The method of claim 17 further comprising:
monitoring the frequency of the current ripples ~~ripple frequency~~ for changes during ~~the~~ operation of the motor.

19. (CURRENTLY AMENDED) The method of claim 18 further comprising:
counting the current ripples contained in the armature current signal; and
modifying the number of counted current ripples as a function of a change in the frequency of the current ripples ~~ripple frequency~~ during the operation of the motor.

20. (CANCELLED)